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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/641,595	08/18/2000	Michael Zimmer	JFH-A12898US	6641

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EXAMINER

PARKER, FREDERICK JOHN

ART UNIT

PAPER NUMBER

1762

9

DATE MAILED: 03/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MF-9

Office Action Summary

Application No.

09/641,595

Applicant(s)

Examiner

Group Art Unit

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☒ Responsive to communication(s) filed on 2/12/02
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 26-45 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 26-45 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

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Response to Amendment

Oath/Declaration

1. Applicants' comments regarding the issues under this heading of the previous Office Action are appreciated, and they resolve the ambiguity.

Claim Objections

2. The objections under this heading are withdrawn because of cancellation of all previous claims.

Claim Rejections - 35 USC § 112

3. The rejections under this heading are withdrawn because of cancellation of all previous claims.
4. The rejections under the 35 USC 103 heading are withdrawn because of cancellation of all previous claims. The new rejections are necessitated by amendments.

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Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 26,28-35,37,39-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Chowdry US 5102767.

Chowdry teaches a method for forming marking toner images in which marking toner images are electrographically applied to a receiver coated with thin layers of a non-marking toner while heating which causes sintering and bonding of marking toner particles at their points of contact ("toner reactive state") and at contact with the coating ("material reactive state"). Bonding would not occur if each was not in a reactive state since bonding per se is a reactive state as set forth by Applicants' specification page 1, 23-29; page 4, 10-12; page 5, 8-11. Marking toner is a thermoplastic polymer with a colorant; non-marking toner is the thermoplastic without colorant. The receiver with a heat-bonded toner image thereon is formed upon cooling. It is inherent that

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heating of the receiver carries thermal energy to be transferred from the non-marking toner to the marking toner, and vice-versa, to create the at least localized melting to perform the sintering/ bonding/ fusion required by the reference. See column 1, 34-46; col. 2, 1-64; col. 4, 7-11; col. 5, 1-60; col. 9-10.

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chowdry.

Chowdry is cited for the same reasons above, which are incorporated herein. Bringing only a surface portion of the non-marking toner layer into a reactive state is not cited. Since it is apparent from Chowdry that it is the surface non-marking layer that must be heated to integrate and bond the marking toner layer, it would have been an obvious variation to sufficiently heat only the surface portions to which marking toner is being applied because of the expectation of achieving equivalent results.

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9. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chowdry in view of Kuehnle et al US 4510225.

Chowdry is cited for the same reasons above, which are incorporated herein. The toner sinking into the surface layer to form a smooth surface structure is not cited.

Kuehnle et al teaches a method for producing printing on a thin, heat softenable thermoplastic layer, in which the outer surface of the layer is selectively heat softened to a tacky state ("reactive state") and then contacted with a toner image by electrophotographic means such that the toner completely adheres to the tacky surface (col. 9, 1-26). The toner image is applied onto the carrier 100 by electrostatic electrophotographic means described on column 8, 26-61 which is the same as Applicants' "electrographic means". A reheating step causes the toner image to become embedded into the layer just below the surface (col. 9, 27-36) which would therefore provide a smooth, planar surface. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Chowdry by reheating/ providing additional heating after application of the toner on the thermoplastic layer as taught by Kuehnle et al to embed the toner

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within the thermoplastic layer to form a smooth surface and provide the toner markings with wear-resistance.

10. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chowdry in view of Silvis et al.

Chowdry is cited for the same reasons above, which are incorporated herein. Forming a thermoplastic onto which a toner is to be subsequently deposited is not cited.

Silvis et al teaches on column 7, lines 56-61 that thermoplastic materials may be fabricated by "thermal processing techniques" including molding, which may then be subsequently coated by any electromotive process (encompassing "electrographic" as defined by Silvis). Given these general teachings, it would have been obvious to one of ordinary skill in the art at the time the invention was made to carry out the process of Kuehnle et al by printing the toner on thermoplastic articles formed by thermal molding as taught by Silvis et al because of the expectation of forming colored images on the molded thermoplastic.

RESPONSE TO REMARKS

Applicants' remarks and arguments have been fully considered. The bulk of Applicants' arguments relate to the limitations of the new claims; these are

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addressed in the new rejections above necessitated by amendment. Since claims 11-25 were canceled, response to arguments regarding those claims are moot. Applicants did not argue the teachings of Silvis et al as expressly used by the Examiner, only stating Silvis et al did not "disclose the claimed method of using such as toner" which was not the intention for introducing Silvis et al. Applicants also argue on page 5 that Kuehnle et al does not teach "printing an image directly to the thermoplastic surface". The Examiner respectfully points out that neither do applicants' claims.

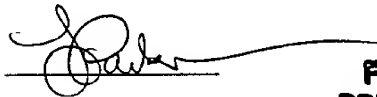
11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

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calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred J. Parker whose telephone number is (703) 308-3474.



**FRED J. PARKER
PRIMARY EXAMINER**

Fred J. Parker

March 12, 2002

fr9-641595